AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of claims

1. (Currently Amended) A method of *in vitro* cultivation of *Polygonatum* comprising the steps of:

contacting a *Polygonatum* seed with a first medium comprising a MS basal culture medium and gibberellic acid (GA_3) present in an amount from about 10 mg/L to about 100 mg/L;

upon emergence of a hypocotyl of a seedling, contacting said seedling with a second medium comprising a MS basal culture medium, 6-benzyl-aminopurine present in an amount from about 3 mg/L to about 6 mg/L, and naphthalene acetic acid (NAA) present in an amount from 0.5 mg/L to about 1.0 mg/L; and

upon emergence of a first foliage leaf of said seedling, contacting said seedling with a third medium comprising a MS basal culture medium, 6-benzyl-aminopurine present in an amount of about 2.0 mg/L, naphthalene acetic acid present in an amount of about 1.0 mg/L, and GA_3 present in an amount from about 5 mg/L to about 20 mg/L,

wherein the MS basal culture medium is selected from the group consisting of MS basal culture medium I and MS basal culture medium II, wherein MS basal culture medium I comprises 2.2 g/L NH_4NO_3, 2.0 g/L KNO_3, 0.44 g/L $CaCl_2 \cdot 2H_2O$, 0.37 g/L $MgSO_4 \cdot 7H_20$, 0.17 g/L KH_2PO_4, 37.25 mg/L Na_2 EDTA, 27.8 mg/L $FeSO_4 \cdot 7H_20$, 0.83 mg/L KI, 6.2 mg/L H_3BO_3,

22.3 mg/L $MnSO_4 \cdot 4H_2O$, 8.6 mg/L $ZnSO_4 \cdot 7H_2O$, 0.25 mg/L $Na_2 MoO_4 \cdot 2H_2O$, 0.025 mg/L $CuSO_4 \cdot 5H_2O$, 0.025 mg/L $CoCl_2 \cdot 6H_2O$, 250 mg/L myo-inositol, 0.5 mg/L nicotinic acid, 0.5 mg/L pyridoxine HCl, 3 mg/L thiamine HCl, 2 mg/L glycine, and 30 g/L sucrose and MS basal culture medium II comprises 1.65 g/L NH_4NO_3, 1.9 g/L KNO_3, 0.44 g/ l $CaCl_2 \cdot 2H_2O$, O.37 g/L $MgSO_4 \cdot 7H_2O$, 0.17 g/L KH_2PO_4, 37.25 mg/L Na_2 EDTA, 27.8 mg/L $FeSO_4 \cdot 7H_2O$, 0.83 mg/L KI, 6.2 mg/L $H_3 BO_3$, 22.3 mg/L $MnSO_4 \cdot 4H_2O$, 8.6 mg/L $ZnSO_4 \cdot 7H_2O$, 0.25 mg/L $Na_2 MoO_4 \cdot 2H_2O$, 0.025 mg/L $CuSO_4 \cdot 5H_2O$, 0.025 mg/L $CoCl_2 \cdot 6H_2O$, 100 mg/L myo-inositol, 0.5 mg/L nicotinic acid, 0.5 mg/L pyridoxine HCl, 0.1 mg/L thiamine HCl, 2 mg/L glycine, and 30 g/L sucrose.

2. (Original) The method of claim 1, wherein the *Polygonatum* is selected from the group consisting of *Polygonatum cirrhifolium*, *Polygonatum oppositifolium*, and *Polygonatum verticillatum L.*

3. (Original) The method of claim 2, wherein the *Polygonatum cirrhifolium*, is *Polygonatum cirrhifolium* Royle.

4. (Original) The method of claim 2, wherein the *Polygonatum oppositifolium*, is *Polygonatum oppositifolium* Royle.

5. (Previously presented) The method of claim 1, wherein GA_3 in the first medium is present in an amount from about 50 mg/L to about 100 mg/L.

6. (Previously presented) The method of claim 1, wherein NAA in the second medium is present in an amount of about 1.0 mg/L.

7. (Previously presented) The method of claim 1, wherein GA_3 in the third medium is present in an amount from about 15 mg/L to about 20 mg/L.

8. (Original) The method of claim 1, wherein the MS basal culture medium of the first, second, and/or third medium is MS basal culture medium I.

9. (Previously presented) The method of claim 1, wherein the MS basal culture medium of the first, second, and/or third medium is MS basal culture medium II.

10. (Previously presented) The method of claim 1, wherein the first, second, and/or third medium further comprises agar.

11. (Original) The method of claim 1, wherein the MS basal culture medium of the first, second, and/or third medium has a pH of about 5.8.

12. (Previously presented) The method of claim 1, wherein said contacting steps are performed at a temperature is from about 20° C to about 24° C.

13. (Previously presented) The method of claim 1, wherein said contacting steps are performed at a relative humidity about 50% to about 60%.

14. (Previously presented) The method of claim 1, wherein said *Polygonatum* is contacted with said first medium in the absence of light.

15. (Original) The method of claim 1, wherein said *Polygonatum* is contacted with said second and/or third medium under illumination of about 2000 to about 3500 lux.

16. (Original) The method of claim 1, wherein the primary explant is contacted with the second medium less than 60 days after said seeds are contacted with the first medium.

17. (Currently Amended) A method of *in vitro* cultivation of *Polygonatum cirrhifolium* Royle comprising the steps of

contacting a *Polygonatum cirrhifolium* Royle seed with a first medium comprising a MS basal culture medium and gibberellic acid (GA_3) present in an amount from about 10 mg/L to about 100 mg/L;

upon emergence of a hypocotyl of a seedling, contacting said seedling with a second medium comprising a MS basal culture medium, 6-benzyl-aminopurine present in an amount from about 3 mg/L to about 6 mg/L, and naphthalene acetic acid (NAA) present in an amount from 0.5 mg/L to about 1.0 mg/L; and

upon emergence of a first foliage leaf of said seedling, contacting said seedling with a third medium comprising a MS basal culture medium, 6-benzyl-aminopurine present in an amount about 2.0 mg/L, NAA present in an amount about 1.0 mg/L, and GA_3 present in an amount from about 5 mg/L to about 20 mg/L.

wherein the steps are performed at a temperature from about 20°C to about 24°C, and the relative humidity is about 50% to about 60%,

wherein the second medium is contacted with the seedling less than 60 days after said seeds are contacted with the first medium, and the seedling is contacted with the third medium less than 90 days after said seeds are contacted with the first medium,

wherein the MS basal culture medium is selected from the group consisting of MS basal culture medium I and MS basal culture medium II, wherein MS basal culture medium I comprises 2.2 g/L NH_4NO_3, 2.0 g/L KNO_3, 0.44 g/L $CaCl_2 \cdot 2H_2O$, O.37 g/L $MgSO_4 \cdot 7H_20$, 0.17 g/L KH_2PO_4, 37.25 mg/L Na_2 EDTA, 27.8 mg/L $FeSO_4 \cdot 7H_20$, 0.83 mg/L KI, 6.2 mg/L H_3BO_3, 22.3 mg/L $MnSO_4 \cdot 4H_20$, 8.6 mg/L $ZnSO_4 \cdot 7H_20$, 0.25 mg/L $Na_2MoO_4 \cdot 2H_20$, 0.025 mg/L

$CuSO_4 \cdot 5H_2O$, 0.025 mg/L $CoCl_2 \cdot 6H_20$, 250 mg/L myo-inositol, 0.5 mg/L nicotinic acid, 0.5 mg/L pyridoxine HCl, 3 mg/L thiamine HCl, 2 mg/L glycine, and 30 g/L sucrose and MS basal culture medium II comprises 1.65 g/L NH_4NO_3, 1.9 g/L KNO_3, 0.44 g/ l $CaCl_2 \cdot 2H_2O$, O.37 g/L $MgSO_4 \cdot 7H_20$, 0.17 g/L KH_2PO_4, 37.25 mg/L Na_2 EDTA, 27.8 mg/L $FeSO_4 \cdot 7H_20$, 0.83 mg/L KI, 6.2 mg/L H_3 BO_3, 22.3 mg/L $MnSO_4 \cdot 4H_20$, 8.6 mg/L $ZnSO_4 \cdot 7H_20$, 0.25 mg/L Na_2 $MoO_4 \cdot 2H_20$, 0.025 mg/L $CuSO_4 \cdot 5H_2O$, 0.025 mg/L $CoCl_2 \cdot 6H_20$, 100 mg/L myo-inositol, 0.5 mg/L nicotinic acid, 0.5 mg/L pyridoxine HCl, 0.1 mg/L thiamine HCl, 2 mg/L glycine, and 30 g/L sucrose.

18. (Currently Amended) A method of germinating *Polygonatum* seeds comprising contacting a plurality of *Polygonatum* seeds with a first medium comprising a MS basal culture medium and gibberellic acid (GA_3) present in an amount from about 10 mg/L to about 100 mg/L

wherein 65-100% of the seeds are germinated and

wherein germination occurs in less than 60 days

wherein the MS basal culture medium is selected from the group consisting of MS basal culture medium I and MS basal culture medium II, wherein MS basal culture medium I comprises 2.2 g/L NH_4NO_3, 2.0 g/L KNO_3, 0.44 g/L $CaCl_2 \cdot 2H_2O$, O.37 g/L $MgSO_4 \cdot 7H_20$, 0.17 g/L KH_2PO_4, 37.25 mg/L Na_2 EDTA, 27.8 mg/L $FeSO_4 \cdot 7H_20$, 0.83 mg/L KI, 6.2 mg/L H_3 BO_3, 22.3 mg/L $MnSO_4 \cdot 4H_20$, 8.6 mg/L $ZnSO_4 \cdot 7H_20$, 0.25 mg/L Na_2 $MoO_4 \cdot 2H_20$, 0.025 mg/L $CuSO_4 \cdot 5H_2O$, 0.025 mg/L $CoCl_2 \cdot 6H_20$, 250 mg/L myo-inositol, 0.5 mg/L nicotinic acid, 0.5 mg/L pyridoxine HCl, 3 mg/L thiamine HCl, 2 mg/L glycine, and 30 g/L sucrose and MS basal culture medium II comprises 1.65 g/L NH_4NO_3, 1.9 g/L KNO_3, 0.44 g/ l $CaCl_2 \cdot 2H_2O$, O.37 g/L $MgSO_4 \cdot 7H_20$, 0.17 g/L KH_2PO_4, 37.25 mg/L Na_2 EDTA, 27.8 mg/L $FeSO_4 \cdot 7H_20$, 0.83 mg/L KI,

6.2 mg/L H_3BO_3, 22.3 mg/L $MnSO_4 \cdot 4H_2O$, 8.6 mg/L $ZnSO_4 \cdot 7H_2O$, 0.25 mg/L $Na_2MoO_4 \cdot 2H_2O$, 0.025 mg/L $CuSO_4 \cdot 5H_2O$, 0.025 mg/L $CoCl_2 \cdot 6H_2O$, 100 mg/L myo-inositol, 0.5 mg/L nicotinic acid, 0.5 mg/L pyridoxine HCl, 0.1 mg/L thiamine HCl, 2 mg/L glycine, and 30 g/L sucrose.

19. (Previously presented) The method of claim 12, wherein GA_3 in said first medium is present in an amount of about 50 mg/L, and

wherein 98% of the seeds generate a seedling.

20. (Currently Amended) A method of germinating *Polygonatum* seeds comprising contacting a plurality of *Polygonatum* seeds with a first medium comprising a MS basal culture medium and gibberellic acid (GA_3) present in an amount from about 50 mg/L wherein 65-100% of said *Polygonatum* seeds germinate in less than 60 days,

wherein the MS basal culture medium is selected from the group consisting of MS basal culture medium I and MS basal culture medium II, wherein MS basal culture medium I comprises 2.2 g/L NH_4NO_3, 2.0 g/L KNO_3, 0.44 g/L $CaCl_2 \cdot 2H_2O$, O.37 g/L $MgSO_4 \cdot 7H_2O$, 0.17 g/L KH_2PO_4, 37.25 mg/L Na_2 EDTA, 27.8 mg/L $FeSO_4 \cdot 7H_2O$, 0.83 mg/L KI, 6.2 mg/L H_3BO_3, 22.3 mg/L $MnSO_4 \cdot 4H_2O$, 8.6 mg/L $ZnSO_4 \cdot 7H_2O$, 0.25 mg/L $Na_2MoO_4 \cdot 2H_2O$, 0.025 mg/L $CuSO_4 \cdot 5H_2O$, 0.025 mg/L $CoCl_2 \cdot 6H_2O$, 250 mg/L myo-inositol, 0.5 mg/L nicotinic acid, 0.5 mg/L pyridoxine HCl, 3 mg/L thiamine HCl, 2 mg/L glycine, and 30 g/L sucrose and MS basal culture medium II comprises 1.65 g/L NH_4NO_3, 1.9 g/L KNO_3, 0.44 g/ 1 $CaCl_2 \cdot 2H_2O$, O.37 g/L $MgSO_4 \cdot 7H_2O$, 0.17 g/L KH_2PO_4, 37.25 mg/L Na_2 EDTA, 27.8 mg/L $FeSO_4 \cdot 7H_2O$, 0.83 mg/L KI, 6.2 mg/L H_3BO_3, 22.3 mg/L $MnSO_4 \cdot 4H_2O$, 8.6 mg/L $ZnSO_4 \cdot 7H_2O$, 0.25 mg/L $Na_2MoO_4 \cdot 2H_2O$,

0.025 mg/L $CuSO_4 \cdot 5H_2O$, 0.025 mg/L $CoCl_2 \cdot 6H_20$, 100 mg/L myo-inositol, 0.5 mg/L nicotinic acid, 0.5 mg/L pyridoxine HCl, 0.1 mg/L thiamine HCl, 2 mg/L glycine, and 30 g/L sucrose.

21. (Previously presented) The method of claim 14, wherein GA_3 in said first medium is present in an amount of about 50 mg/L and wherein 98% of the seeds generate a seedling.

22. (Currently Amended) A method of inducing synchronous release of epicotyl dormancy, coleoptile dormancy, and radicle dormancy in *Polygonatum* comprising contacting a hypocotyl-bearing *Polygonatum* seed with a medium comprising a MS basal culture medium, 6-benzyl-aminopurine present in an amount from about 3 mg/L to about 6 mg/L, and naphthalene acetic acid present in an amount from 0.5 mg/L to about 1.0 mg/L,

wherein the MS basal culture medium is selected from the group consisting of MS basal culture medium I and MS basal culture medium II, wherein MS basal culture medium I comprises 2.2 g/L NH_4NO_3, 2.0 g/L KNO_3, 0.44 g/L $CaCl_2 \cdot 2H_2O$, O.37 g/L $MgSO_4 \cdot 7H_20$, 0.17 g/L KH_2PO_4, 37.25 mg/L Na_2 EDTA, 27.8 mg/L $FeSO_4 \cdot 7H_20$, 0.83 mg/L KI, 6.2 mg/L $H_3 BO_3$, 22.3 mg/L $MnSO_4 \cdot 4H_20$, 8.6 mg/L $ZnSO_4 \cdot 7H_20$, 0.25 mg/L $Na_2 MoO_4 \cdot 2H_20$, 0.025 mg/L $CuSO_4 \cdot 5H_2O$, 0.025 mg/L $CoCl_2 \cdot 6H_20$, 250 mg/L myo-inositol, 0.5 mg/L nicotinic acid, 0.5 mg/L pyridoxine HCl, 3 mg/L thiamine HCl, 2 mg/L glycine, and 30 g/L sucrose and MS basal culture medium II comprises 1.65 g/L NH_4NO_3, 1.9 g/L KNO_3, 0.44 g/ l $CaCl_2 \cdot 2H_2O$, O.37 g/L $MgSO_4 \cdot 7H_20$, 0.17 g/L KH_2PO_4, 37.25 mg/L Na_2 EDTA, 27.8 mg/L $FeSO_4 \cdot 7H_20$, 0.83 mg/L KI, 6.2 mg/L $H_3 BO_3$, 22.3 mg/L $MnSO_4 \cdot 4H_20$, 8.6 mg/L $ZnSO_4 \cdot 7H_20$, 0.25 mg/L $Na_2 MoO_4 \cdot 2H_20$, 0.025 mg/L $CuSO_4 \cdot 5H_2O$, 0.025 mg/L $CoCl_2 \cdot 6H_20$, 100 mg/L myo-inositol, 0.5 mg/L nicotinic acid, 0.5 mg/L pyridoxine HCl, 0.1 mg/L thiamine HCl, 2 mg/L glycine, and 30 g/L sucrose.

23. (Cancelled)

24. (Cancelled)

25. (Cancelled)

26. (Cancelled)

27. (Cancelled)

28. (Cancelled)

29. (Cancelled)

30. (Cancelled)

31. (Cancelled)

32. (Cancelled)

33. (Cancelled)

34. (Cancelled)

35. (Cancelled)

36. (Cancelled)

37. (Cancelled)

38. (Cancelled)

39. (Cancelled)

40. (Cancelled)

41. (Currently Amended) A method for fast and synchronized *in vitro* induction of germination in *Polygonatum cirrhifolium* Royle, said method comprising:

a. obtaining the seeds from plant *Polygonatum cirrhifolium* Royle,wherein the

seeds are sterilized,

b. placing the sterilized seeds in sterile disposable plastic Petri plates (10 x 2 cm) containing semi-solid culture medium with 7.5% agar,

c. incubating the petri dishes at temperature ranging between 20 to 24^{0}C and at a relative humidity (RH) ranging between 50 to 60%, wherein the petri dishes are parafilm sealed,

d. transferring said seeds with emerged hypocotyl under aseptic conditions using Laminar Air Flow, to first medium culture comprising Murashige and Skoog's (MS) basal culture medium, and Gibberellic acid (GA_3) present in an amount ranging between 10 to 100 mg/L ,

e. incubating one set of said first medium culture at 30°C under continuous dark conditions,

f. incubating a second set of said first medium culture under diurnal temperature regime of 30/20°C, and continuous dark conditions, and

g. transferring the said germinating seeds to a third set of first medium culture at 20^{0}C under 16 hours photoperiod in a growth chamber,

wherein said first medium culture has a pH adjusted to 5.8 with 1N NaOH or 1N HCl, is sterilized for 20 minutes at 121°C and 15 lb. psi pressure, comprises GA_3 incorporated into said medium after filter sterilization using 0.22 μm pore size filter to cooled autoclaved medium and dispensed into petri dishes as 30 ml aliquots and

wherein the MS basal culture medium is selected from the group consisting of MS basal culture medium I and MS basal culture medium II, wherein MS basal culture medium I

comprises 2.2 g/L NH_4NO_3, 2.0 g/L KNO_3, 0.44 g/L $CaCl_2 \cdot 2H_2O$, O.37 g/L $MgSO_4 \cdot 7H_20$, 0.17 g/L KH_2PO_4, 37.25 mg/L Na_2 EDTA, 27.8 mg/L $FeSO_4 \cdot 7H_20$, 0.83 mg/L KI, 6.2 mg/L H_3BO_3, 22.3 mg/L $MnSO_4 \cdot 4H_20$, 8.6 mg/L $ZnSO_4 \cdot 7H_20$, 0.25 mg/L $Na_2 MoO_4 \cdot 2H_20$, 0.025 mg/L $CuSO_4 \cdot 5H_2O$, 0.025 mg/L $CoCl_2 \cdot 6H_20$, 250 mg/L myo-inositol, 0.5 mg/L nicotinic acid, 0.5 mg/L pyridoxine HCl, 3 mg/L thiamine HCl, 2 mg/L glycine, and 30 g/L sucrose and MS basal culture medium II comprises 1.65 g/L NH_4NO_3, 1.9 g/L KNO_3, 0.44 g/ l $CaCl_2 \cdot 2H_2O$, O.37 g/L $MgSO_4 \cdot 7H_20$, 0.17 g/L KH_2PO_4, 37.25 mg/L Na_2 EDTA, 27.8 mg/L $FeSO_4 \cdot 7H_20$, 0.83 mg/L KI, 6.2 mg/L H_3BO_3, 22.3 mg/L $MnSO_4 \cdot 4H_20$, 8.6 mg/L $ZnSO_4 \cdot 7H_20$, 0.25 mg/L $Na_2 MoO_4 \cdot 2H_20$, 0.025 mg/L $CuSO_4 \cdot 5H_2O$, 0.025 mg/L $CoCl_2 \cdot 6H_20$, 100 mg/L myo-inositol, 0.5 mg/L nicotinic acid, 0.5 mg/L pyridoxine HCl, 0.1 mg/L thiamine HCl, 2 mg/L glycine, and 30 g/L sucrose.

42. (Previously presented) The method of claim 41, wherein between 65 to 98% of the seeds are germinated, within a period of between 7 to 53 days, and wherein between 78 to 100% of seeds release ~~of~~ epicotyl, coleoptile and radicle within between 11 to 18 days.

43. (Previously presented) The method of claim 41, wherein about 98% of the seed are germinated within between 7 to 23 days, said composition comprises about 50mg/L of GA_3.

44. (Previously presented) The method of claim 41, wherein about 100% of the seeds release the epicotyl, coleoptile and radicle between 11 to 14 days, said composition comprising GA_3 in an amount between 50 to 100 mg/L.

45. (Previously presented) The method of claim 41, wherein germination of seeds occurs *in vitro* within 81 day.

46. (Previously presented) The method of claim 41, wherein said first medium further

comprises plant hormones selected from the group consisting of alpha- naphthalene acetic acid (NAA), and 6-benzyl-aminopurine (BAP).

47. (Cancelled)

48. (Previously presented) The method of claim 41, further comprising washing the seeds thoroughly for 2 hours under tap water with 1-2 drops of Tween-20 ™ and rinsing with distilled water.

49. (Previously presented) The method of claim 42, wherein the seeds are sterilized with 0.1% mercuric chloride ($HgCl_2$).

50. (Cancelled)

51. (Cancelled)

52. (Cancelled)

53. (Cancelled)

54. (Cancelled)

55. (Cancelled)

56. (Cancelled)

57. (Currently Amended) A method for inducing release of epicotyl dormancy in *Polygonatum cirrhifolium* Royle comprising:

a. preparing a medium composition comprising MS basal culture medium, 6-benzyl-aminopurine (BAP) present in an amount ranging between 3 to 6 mg/L, and naphthalene acetic acid (NAA) present in an amount ranging between 0.5 to 1.0 mg/L,

b. adjusting pH of the medium to 5.8 with 1N NaOH or 1N HCl,

c. sterilizing the medium for 20 minutes at 121°C and 15 lb. psi pressure,

d. dispensing the medium into petri dishes as 30 ml aliquots,

e. transferring seedlings consisting of epicotyl with emergent coleoptile and radicle obtained, from said germinating seeds, under aseptic conditions, into the said dishes, using Laminar Air Flow, and

f. incubating the said dishes at 20°C under 16 hr photoperiod with light intensity of 2000 lux provided by cool, white fluorescent tubes of 40 watts,

wherein the MS basal culture medium is selected from the group consisting of MS basal culture medium I and MS basal culture medium II, wherein MS basal culture medium I comprises 2.2 g/L NH_4NO_3, 2.0 g/L KNO_3, 0.44 g/L $CaCl_2 \cdot 2H_2O$, O.37 g/L $MgSO_4 \cdot 7H_20$, 0.17 g/L KH_2PO_4, 37.25 mg/L Na_2 EDTA, 27.8 mg/L $FeSO_4 \cdot 7H_20$, 0.83 mg/L KI, 6.2 mg/L H_3BO_3, 22.3 mg/L $MnSO_4 \cdot 4H_20$, 8.6 mg/L $ZnSO_4 \cdot 7H_20$, 0.25 mg/L $Na_2MoO_4 \cdot 2H_20$, 0.025 mg/L $CuSO_4 \cdot 5H_2O$, 0.025 mg/L $CoCl_2 \cdot 6H_20$, 250 mg/L myo-inositol, 0.5 mg/L nicotinic acid, 0.5 mg/L pyridoxine HCl, 3 mg/L thiamine HCl, 2 mg/L glycine, and 30 g/L sucrose and MS basal culture medium II comprises 1.65 g/L NH_4NO_3, 1.9 g/L KNO_3, 0.44 g/ l $CaCl_2 \cdot 2H_2O$, O.37 g/L $MgSO_4 \cdot 7H_20$, 0.17 g/L KH_2PO_4, 37.25 mg/L Na_2 EDTA, 27.8 mg/L $FeSO_4 \cdot 7H_20$, 0.83 mg/L KI, 6.2 mg/L H_3BO_3, 22.3 mg/L $MnSO_4 \cdot 4H_20$, 8.6 mg/L $ZnSO_4 \cdot 7H_20$, 0.25 mg/L $Na_2MoO_4 \cdot 2H_20$, 0.025 mg/L $CuSO_4 \cdot 5H_2O$, 0.025 mg/L $CoCl_2 \cdot 6H_20$, 100 mg/L myo-inositol, 0.5 mg/L nicotinic acid, 0.5 mg/L pyridoxine HCl, 0.1 mg/L thiamine HCl, 2 mg/L glycine, and 30 g/L sucrose.

58. (Previously presented) The method of claim 57, wherein between 65 to 86% of the seedlings produce leaves, said seedlings exhibiting a mean number of leaves ranging between 2.7

to 4, and a mean leaf length ranging between 3 to 6 cms.

59. (Previously presented) The method of claim 57, wherein about 86% of the seedlings produce leaves, said seedlings exhibit a mean number of leaves of about 3.4 per seedling, and a mean leaf length of about 6 cms, wherein said composition comprises NAA present in an amount of about 1.0 mg/L.

60. (Previously presented) The method of claim 57, wherein said composition further comprises plant hormones selected from the group consisting of gibberellic acid (GA_3), alpha-naphthalene acetic acid (NAA), and 6-benzyl-aminopurine (BAP).

61. (Cancelled)

62. (Previously presented) The method of claim 57, further comprising washing seeds used to produce the seedlings thoroughly for 2 hours under tap water with 1-2 drops of Tween-20 ™ and rinsing the seeds with distilled water.

63. (Previously presented) The method of claim 62, wherein said rinsed seeds are sterilized with 0.1% mercuric chloride ($HgCl_2$).

64. (Cancelled)

65. (Cancelled)

66. (Cancelled)

67. (Cancelled)

68. (Cancelled)

69. (Cancelled)

70. (Cancelled)

71. (Currently Amended) A method for inducing release of epicotyl dormancy from differentiated de novo axillary bud and release of foliage leaves in *Polygonatum cirrhifolium* Royle,comprising:

a. preparing a medium composition comprising MS basal culture medium, 6-benzyl-aminopurine (BAP) present in an amount about 2.0 mg/L, naphthalene acetic acid (NAA) present in an amount about 1.0 mg/L, and gibberellic acid (GA_3) present in an amount ranging between 5 to 20 mg/L, wherein GA_3 is incorporated into MS basal culture medium containing NAA and BAP after filter sterilization using a 0.22mm pore size filter to cooled autoclaved

medium,

b. transferring seedlings comprising epicotyl with emergent coleoptile and radicle obtained from germinating seeds incubated under aseptic conditions using Laminar Air Flow,

c. incubating the said seedlings at about 20°C under duration ranging between 10 to 6 hr photoperiod, with light intensity of about 2000 lux,

d. maintaining the seedlings at 50-60% relative humidity,

e. subculturing the seedlings after every four weeks onto fresh medium compositions,

wherein the MS basal culture medium is selected from the group consisting of MS basal culture medium I and MS basal culture medium II, wherein MS basal culture medium I comprises 2.2 g/L NH_4NO_3, 2.0 g/L KNO_3, 0.44 g/L $CaCl_2 \cdot 2H_2O$, O.37 g/L $MgSO_4 \cdot 7H_20$, 0.17 g/L KH_2PO_4, 37.25 mg/L Na_2 EDTA, 27.8 mg/L $FeSO_4 \cdot 7H_20$, 0.83 mg/L KI, 6.2 mg/L H_3BO_3, 22.3 mg/L $MnSO_4 \cdot 4H_20$, 8.6 mg/L $ZnSO_4 \cdot 7H_20$, 0.25 mg/L $Na_2MoO_4 \cdot 2H_20$, 0.025 mg/L $CuSO_4 \cdot 5H_2O$, 0.025 mg/L $CoCl_2 \cdot 6H_20$, 250 mg/L myo-inositol, 0.5 mg/L nicotinic acid, 0.5 mg/L pyridoxine HCl, 3 mg/L thiamine HCl, 2 mg/L glycine, and 30 g/L sucrose and MS basal culture medium II comprises 1.65 g/L NH_4NO_3, 1.9 g/L KNO_3, 0.44 g/ 1 $CaCl_2 \cdot 2H_2O$, O.37 g/L $MgSO_4 \cdot 7H_20$, 0.17 g/L KH_2PO_4, 37.25 mg/L Na_2 EDTA, 27.8 mg/L $FeSO_4 \cdot 7H_20$, 0.83 mg/L KI, 6.2 mg/L H_3BO_3, 22.3 mg/L $MnSO_4 \cdot 4H_20$, 8.6 mg/L $ZnSO_4 \cdot 7H_20$, 0.25 mg/L $Na_2MoO_4 \cdot 2H_20$, 0.025 mg/L $CuSO_4 \cdot 5H_2O$, 0.025 mg/L $CoCl_2 \cdot 6H_20$, 100 mg/L myo-inositol, 0.5 mg/L nicotinic acid, 0.5 mg/L pyridoxine HCl, 0.1 mg/L thiamine HCl, 2 mg/L glycine, and 30 g/L sucrose.

72. (Previously presented) The method of claim 71 wherein between 70 to 100% of the

seedlings produce axillary buds, said seedlings exhibiting a mean number of axillary buds per explant ranging between 6 to 12, and wherein between 45 to 98% of said axillary buds produce leaves.

73. (Previously presented) The method of claim 71 wherein about 100% of the seedlings producing axillary buds, number of axillary buds per seedling ranging between 9 to 12, and wherein between 77 to 98% of said axillary buds produce leaves, said composition comprises GA_3 present in an amount ranging between 15 to 20 mg/L.

74. (Cancelled)

75. (Cancelled)

76. (Previously presented) The method of claim 71, further comprising washing seeds used to produce the seedlings thoroughly for 2 hours under tap water with 1-2 drops of Tween-20 ™ and rinsing the seeds with distilled water.

77. (Previously presented) The method of claim 76, wherein said rinsed seeds are sterilized with 0.1% mercuric chloride ($HgCl_2$).

78. (Cancelled)

79. (Cancelled)

80. (Cancelled)

81. (Cancelled)

82. (Cancelled)

83. (Cancelled)

84. (Cancelled)